

Performance and acceptability of intrauterine release of levonorgestrel with a miniature delivery system for hormonal substitution therapy, contraception and treatment in peri- and postmenopausal women

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Abstract

Objective: To evaluate the performance and acceptability of a novel intrauterine drug delivery system, FibroPlant-levonorgestrel (LNG), derived from the frameless GyneFix intrauterine device, in 141 perimenopausal and postmenopausal women. The trial is an extension of an earlier conducted pilot study. *Design:* A 1-year non-comparative prospective clinical trial.

Subjects: The treatment with the FibroPlant-LNG intrauterine system (IUS) was instituted to establish a smooth transition to menopause and suppress the endometrium during estrogen substitution therapy (EST) to prevent endometrial proliferation and bleeding. Also women with heavy or postmenopausal bleeding, and women needing contraception, were included in the study. The majority of peri- and postmenopausal women received percutaneous 17 β estradiol (Oestrogel), 1.5 mg daily on a continuous basis, which provides sufficient blood levels of estrogen in most women to suppress climacteric symptoms and protection against bone loss.

Outcome measures: The clinical results and ultrasonographic effect of this new intrauterine progestin delivery system. A 4-cm long coaxial fibrous delivery system, delivering approximately 14 μ g/day of levonorgestrel (LNG) was used. The calculated duration of release of the system is at least 3 years.

Results: Eighty-three insertions were done in perimenopausal women with age between 44 and 64, and 58 in postmenopausal women with age between 43 and 73. Over 90% were followed-up for at least one year (range 8-38 months). Fifty-one perimenopausal women received the IUS for contraception in addition to EST. There were no pregnancies reported in the study. Of the total group of 141 women, 108 women maintained or developed amenorrhoea, 52 or 63.5% of the perimenopausal and virtually 100% of the postmenopausal women, respectively, with occasional spotting requiring panty liner protection or no protection in the latter women. Twenty-one perimenopausal women (25.6%) had strongly reduced regular menstruations without spotting. Seven women (8.5%) complained of significant irregular bleeding which resulted in 3 of the 4 removals in the study. In one of them a large polyp (2.5 cm in diameter) was removed. Eleven women with heavy bleeding (5 of them with single or multiple intramural and subserosal fibroids (3-6 or cm or more with no evidence of submucosal fibroids) were all successfully treated, except one. All women with hyperplasia (6 simple and 2 atypical adenomatous hyperplasia) were treated effectively as confirmed by endometrial biopsy performed at least 12 months following treatment initiation.

The ultrasonographic appearance of the endometrium was that of a thin endometrium (<5 mm in thickness) in all amenorrhoeic women as well as in the women who continued to have slight bleeding. The study with total number of 1432 women-months of use was well followed-up. Only

3 women (2.4%) were lost for final analysis. Ninety-three percent of women are continuing to use the method.

Conclusion: The results of this study in perimenopausal and postmenopausal women suggest that the frameless FibroPlant-LNG IUS is safe, well tolerated and effective in suppressing the endometrium during EST. The small insertion tube (3.8 mm) allows easy passage through the cervix in virtually all women. FibroPlant-LNG IUS is a highly satisfactory mini-dose treatment with a high continuation of use. The fact that the IUS also acts as a contraceptive, and significantly reduces menstrual bleeding, as demonstrated in earlier studies, is of added importance. The optimal time to initiate the substitution therapy is during perimenopause when women are likely to consider ongoing treatment. FibroPlant-LNG IUS could then contribute to maximise the long-term health benefits of HST.